

ABSTRACT

The present invention can execute efficiently the provision of a film-formable thermoplastic composition containing polysaccharides and proteins as the main ingredients or the preparation of polyester foamed products of practical utility by compressing a substance together with carbon dioxide and processing it as a fluid of critical state. An equipment useful for it is a screw type processing equipment for compressing a substance together with carbon dioxide continuously to give a fluid of critical state and the equipment is one in which the extruding screw having next to the raw material supplying part X, a vacuum part E in which the shaft of said screw is made thin and the gap volume between the screw blades is increased is provided and carbon dioxide is introduced to the vacuum part E and furthermore after the vacuum part E a compressing part F in which the shaft is again thickened and consisted of a screw having narrowed blade intervals is placed and then the thickness of the shaft is made to be substantially same as the periphery of the barrel and an orifice part L is provided in which an orifice 17 is provided on the surface or on the surroundings of said shaft. The maximum flow rate of the substance passing through the orifice is preferably designed to be 10 to 1500 cm/second.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5